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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,807

10/10/2006

Susanne Kessler

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EXAMINER

MAEWALL, SNIGDHA

ART UNIT

PAPER NUMBER

1612

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,807	Applicant(s) KESSLER ET AL.	
	Examiner Snigdha Maewall	Art Unit 1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-6, 8-10, 17-18 and 20-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7, 11-16 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/10/06, 01/08/07 and 01/26/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. Receipt of IDS filed on 10/10/06, 01/08/07 and 01/26/09 is acknowledged.

Applicant's election with traverse of Group III, claims 7, 11-16 and 19 in the reply filed on 01/07/10 is acknowledged. The traversal is on the ground(s) that groups 8-9 are similar in scope as group III so the groups should be included in prosecution. This is not found persuasive because search for specific amount disclosed for various components in Group III claims are different from claims 8-9 which will require further search burden to the Examiner. The requirement is still deemed proper and is therefore made FINAL.

Claims 1-6, 8-10, 17-18 and 20-27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 01/07/10.

Claims **7, 11-16 and 19** are under prosecution.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7, 11-16 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where values can vary depending on the basis for their determination, the claimed subject matter may be indefinite. See Honeywell Intl. v. Intl. Trade Commn., 341 F.3d 1332, 1340 (Fed. Cir. 2003). (Holding that, where a claimed value varies with its method of measurement and several alternative methods of measurement are available, the value is indefinite when the claim fails to concurrently recite the method of measurement used to obtain it). Accordingly, the percent values recited by instant claims are incomplete insofar as they do not specify the frame of reference used to measure them, e.g., is percent by weight of total composition or something else?

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 11-12, 14-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fechner et al. (WO 03/018498) (IDS), wherein US 2004/0253321 is

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being used as the English language equivalent of WO 03/018498 in view of Mazany et al. (US 2005/0022698).

(NOTE: All citations to Fechner are to US 2004/0253321).

Fechner teaches anti-microbial, anti-inflammatory, wound-healing glass powders preferably comprising (i) 20-80% w/w SiO₂, (ii) 0-40% w/w Na₂O, (iii) 0-40% w/w K₂O, (iv) 0-40% w/w Li₂O, (v) 0-40% w/w CaO, (vi) 0-40% w/w MgO, (vii) 0-40% w/w Al₂O₃, and (ix) 0-1 % w/w P₂O₅, and 0-40% w/w B₂O₃ (Title; abstract; [0015]; [0029]; claims 1-8). In some embodiments, the glass powders may also comprise Ag, Cu, and Zn to achieve synergistically strengthened antimicrobial and anti-inflammatory effects [0021]. The particle sizes of the glass powder are ideally below 2 microns or 1 micron ([0030] and claims 12-14). The B₂O₃ is added to act as a network-forming ion and to control the anti-inflammatory and wound-healing effects of the glass powders [0039].

Fechner does not anticipate the rejected claims, because Fechner does not exemplify glass powders comprising >60 to 80% P₂O₅. The claimed glass powders are nonetheless prima facie obvious per the teachings of Fechner as explained below.

The reference does not teach the claimed amount of P₂O₅.

Mazany teaches a reactive glass comprising Li₂O, P₂O₅, B₂O₃, MgO, BaO, and Al₂O₃ in claim 15, wherein the amounts of P₂O₅ and B₂O₃ can range from ~7 % w/w to ~83% w/w and ~0.5% w/w to ~84% w/w, respectively. In claim 16 Mazany teaches a glass comprising Li₂O, P₂O₅, B₂O₃, MgO, BaO, Al₂O₃, and SiO₂, wherein the

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amount of silicon oxide may range from ~0.5% w/w to ~18% w/w and B_2O_3 and P_2O_5 may be present in amounts up to about 59% w/w and 87% w/w, respectively.

Mazany teaches that the particle size of the reactive glass is important and can be optimized to tune the glass reactivity, wherein smaller particle sizes result in greater glass reactivity [0090].

It would have been obvious to one of ordinary to optimize the amount to more than 60 to 80 % for P_2O_5 because Mazany teaches glass composition amount to up to 87% absent evidence of any criticality shown by applicants. Since the claims recite the ranges for ZnO 0 - 15 percent by weight

Ag₂O 0.01 - 5 percent by weight
CuO 0 - 10 percent by weight
GeO₂ 0 - 10 percent by weight
TeO₂ 0 - 15 percent by weight
Cr₂O₃ 0 - 10 percent by weight
J 0 - 10 percent by weight,

the amount of Ag₂O to be from 0 to 0.5% reads on the total sum of the above components as claimed that is < than 0.01%.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fechner et al. (WO 03/018498) (IDS), wherein US 2004/0253321 is being used as the English language equivalent of WO 03/018498 in view of Mazany et al. (US 2005/0022698) and further in view of JP61186248 and JP 7291654 presented in IDS.

The references discussed above do not disclose strontium oxide in the composition.

JP'248 teaches strontium oxide, aluminium oxide, lithium sodium potassium and boron oxide in glass ceramic composition and also teaches that the thermal expansion

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can be adjusted between 38 deg. C to 380 deg. C., see abstract. The reference thus teaches equivalency between aluminum, calcium, boron and strontium oxides used in glass composition.

JP 7291654 teaches antimicrobial glass powder comprising alkaline earth metals such as barium, calcium and magnesium in the composition, abstract.

It would have been obvious to one of ordinary to have utilized strontium oxide in the teachings of combined references discussed above because JP'248 teaches incorporation of strontium oxide in glass composition and provides equivalency among other oxides which are disclosed in primary references and JP'654 teaches utilization of alkaline earth metal oxides such as barium and calcium as antimicrobial powder. One of ordinary would have been motivated to utilize alkaline earth metal oxides such as strontium oxide as antimicrobial component in forming glass composition and would have had reasonable expectation of success in obtaining such composition.

7. Claims 7, 11-12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aucar et al. (DE 10322444 A1) (Eng. Abs. Only).

Aucar teaches cosmetic compositions with decorative and antimicrobial effects that contain bioactive glass, colored glass, glass-ceramic, glass powder, glass-ceramic powder, and/or a glass/nanoparticle composite (abstract). The glass-based components impart antimicrobial properties as well as a wide range of optical effects (Id.). Preferred compositions comprise **SiO₂ (35-80%), Na₂O (0-35%), P₂O₅ (0-80%), MgO (0-5%), Ag₂O (0-0.5%), AgI (0-0.5%), NaI (0-5%), TiO₂ (0-5%), K₂O (0-35%),**

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ZnO (0-10%), Al₂O₃ (0-25%), and B₂O₃ (0-25%). (see paragraphs [0017-0019]. The average particle size of the glass powder, glass-ceramic powder, or colored glass powder is below 100 microns, especially below 1 micron (ld.).

The reference teaches overlapping amounts of the claimed P₂O₅, Al₂O₃ and Na₂O, as such case of obviousness exists.

Since the claims recite the ranges for ZnO 0 - 15 percent by weight

Ag₂O 0.01 - 5 percent by weight

CuO 0 - 10 percent by weight

GeO₂ 0 - 10 percent by weight

TeO₂ 0 - 15 percent by weight

Cr₂O₃ 0 - 10 percent by weight

J 0 - 10 percent by weight ,

the amount of Ag₂O to be from 0 to 0.5% reads on the total sum of the above components as claimed that is < than 0.01%.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Snigdha Maewall whose telephone number is (571)-272-6197. The examiner can normally be reached on Monday to Friday; 8:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Krass can be reached on (571) 272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-0580.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Snigdha Maewall/
Examiner, Art Unit 1612
/Gollamudi S Kishore/
Primary Examiner, Art Unit 1612